



1 City of Racine, Wisconsin  
2 COMMON COUNCIL

3 **AGENDA BRIEFING MEMORADUM (ABM)**

4 **COMMITTEE:** Finance and Personnel **LEGISLATION ITEM #:**

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5 **AGENDA DATE:** September 11, 2017

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7 **DEPARTMENT:**

8 **Prepared By:** Amy Connolly, Director of City Development

9 **Reviewed By:** James Palenick, City Administrator

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11 **SUBJECT:** Communication from the Director of City Development requesting approval of contract with  
12 DTI, Inc. (Deep-Earth Technologies, Inc.) for a pilot study and site planning & oversight contributing to the  
13 remediation of the north lot of Racine Steel Castings, 1425 North Memorial Drive.

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15 **EXECUTIVE SUMMARY:**

16 City staff, RCEDC, and consulting attorneys recommend that the City approve a contract with Deep-Earth  
17 Technologies, Inc. (DTI) to conduct a pilot study of a product called "Cool-Ox", which is an oxygen based  
18 chemical, to begin the clean-up a small portion of the Racine Steel Castings site that is very  
19 contaminated. The pilot test and work plans have been approved by the EPA and DNR and City staff has  
20 been encouraged by EPA to proceed with this pilot test using EPA grant monies. City staff will be  
21 bringing forward contracts very soon to finalize work on the remaining portions of Racine Steel Casting  
22 within the next month.

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24 **BACKGROUND & ANALYSIS:**

25 The Racine Steel Castings – North Lot (RSC-North) is an approximately 2.3-acre parcel that is  
26 part of a larger property located at 1425 North Memorial Drive.

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28 The Racine Steel Castings site has a history of industrial use since at least the late 1800s, which  
29 included use as a foundry, historic filling, underground and aboveground storage tanks, electric  
30 transformers, chemical drum storage, and several reported spills/releases. The City has  
31 conducted extensive investigation of the subject property over the last approximate 7 years and  
32 is evaluating options and planning for remedial action prior to redevelopment of the site.

33 In general, much of the site is covered with foundry sand fill, and has low levels of metals,  
34 polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and  
35 polychlorinated biphenyls (PCBs) that are anticipated to be addressed by capping and  
36 institutional controls, in conjunction with redevelopment of the site.

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38 In addition, low levels of metals, PAHs, PCBs and VOCs have been detected in one or more  
39 groundwater samples collected from existing monitoring wells on the site. The most recent  
40 groundwater sampling was conducted in April 2017 to evaluate the monitoring well network and  
41 obtain a baseline of contaminant concentrations necessary to design the natural attenuation  
42 monitoring plan

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44 **One area within the RSC North Lot, totaling approximately 3000 square-feet, has also been identified**  
45 **with PCB soil impacts above the United States Environmental Protection Agency (USEPA) Toxic**  
46 **Substances Control Act (TSCA) regulated concentration of 50 milligrams per kilogram (mg/kg) and high**  
47 **concentrations of 1,2,4-trichlorobenzene (TCB). This small, 3,000 s.f. area, is our “test site” area in**  
48 **which we wish to use a new technology to clean the soils, which we have identified as a significant**  
49 **cost savings against other clean up methods.**

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51 City staff proposes approving a contract with Deep-Earth Technologies, Inc. to conduct the pilot test of  
52 the 3,000 s.f. area within the north lot and to use a combination of remaining EPA grant funds and  
53 budgeted intergovernmental revenue funds to complete the test.

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55 The remaining portions of the site can be remediated through more traditional methods, such as hauling  
56 away small amounts of contaminated soils. City staff will bring forward work proposals for the  
57 remainder of the site within the next month.

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60 **BUDGETARY IMPACT:**

61 Total project costs for the Pilot Test will be \$233,133.00, which includes a maximum of \$210,000 for the  
62 pilot study by Deep-Earth Technologies and \$23,133 for site planning and project oversight.

63 The project will be paid for by combining the remaining North Lot EPA grant of \$95,515.53 and  
64 Intergovernmental Revenue Funds of \$137,617.47.

65 Funds in the amount of \$300,000 were budgeted in the 2017 CIP for Racine Steel Castings Brownfield  
66 Cleanup and funds are available for this project.

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68 **OPTIONS/ALTERNATIVES:**

- 69 **1. Approve the contract with Deep-Earth Technologies for the pilot study**  
70 **2. Direct staff to use a different clean-up method for the North Lot area and bring back quotes**  
71 **for the work.**

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75 **RECOMMENDED ACTION:**

76 Approval a contract with DTI, Inc. (Deep-Earth Technologies, Inc.) for a pilot study and site planning &  
77 oversight contributing to the remediation of the north lot of Racine Steel Castings, 1425 North Memorial  
78 Drive.

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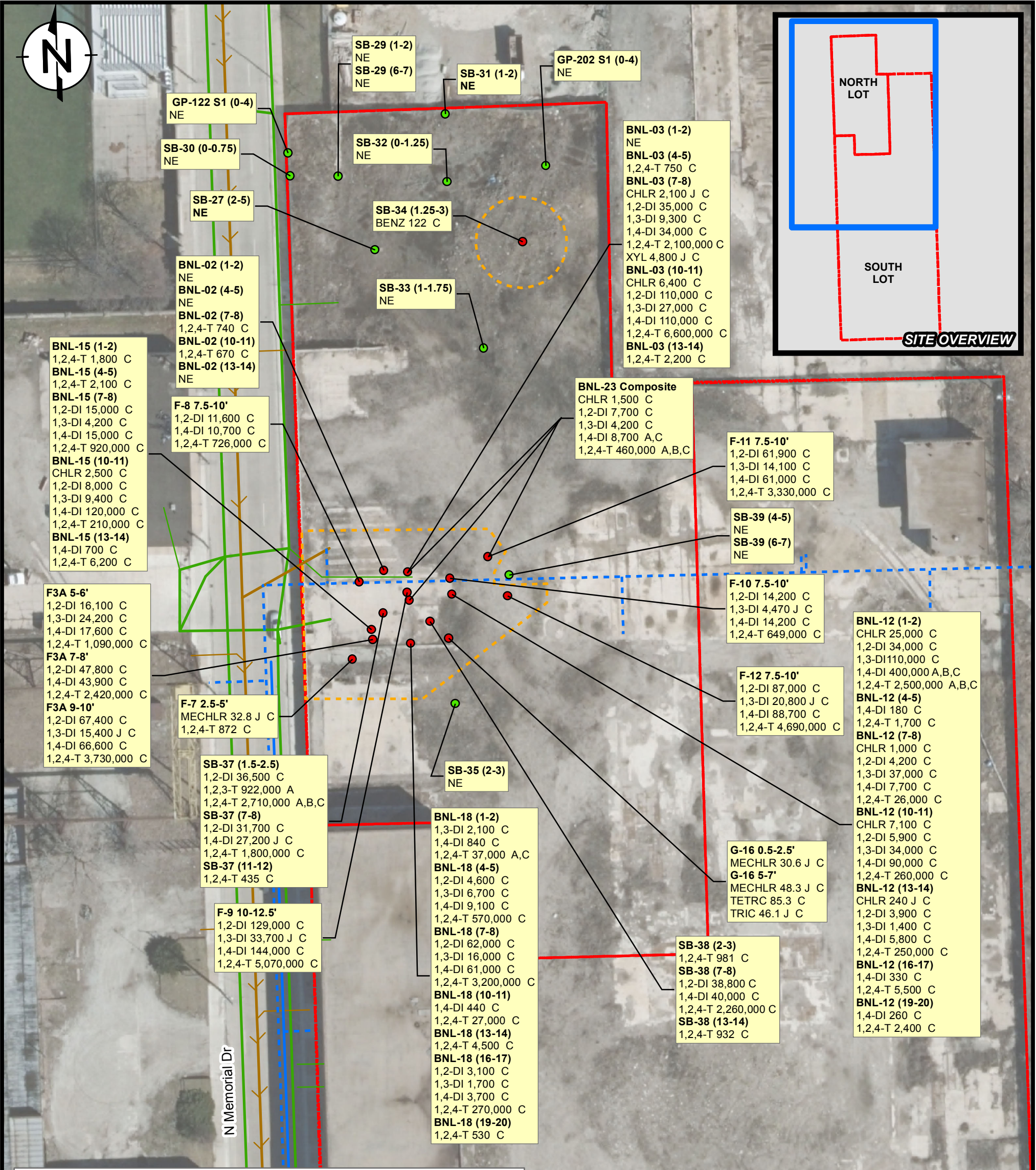
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80 **ATTACHMENT(S):**

- 81 1. Final DTI Contract dated 9/7/17  
82 2. Final DTI Proposal dated 9/7/17  
83 3. Project Finance Structure  
84 4. Pilot Study Public Information Document

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**Note:** Concentrations of volatile organic compounds (VOCs) are compared to the Wisconsin Department of Natural Resources Residual Contaminant Levels (RCLs). Exceedances of the RCLs are displayed on this figure. The table below displays the RCLs for these parameters in units of micrograms per kilogram (ug/kg).

Parameter	Non-Industrial Direct Contact (RCL) A	Industrial Direct Contact RCL (B)	Groundwater Pathway RCL (C)
Benzene (BENZ)	1,600	7,070	5.12
Chlorobenzene (CHLR)	370,000	761,000	135.8
1,2-Dichlorobenzene (1,2-DI)	376,000	376,000	1,168
1,3-Dichlorobenzene (1,3-DI)	297,000	297,000	1,153
1,4-Dichlorobenzene (1,4-DI)	3,740	16,400	144
Methylene chloride (MCHLR)	61,800	1,150,000	2.56
Tetrachloroethene (TETRC)	33,000	145,000	4.54
1,2,3-Trichlorobenzene (1,2,3-T)	62,600	934,000	--
1,2,4-Trichlorobenzene (1,2,4-T)	24,000	113,000	408.0
Trichloroethene (TRIC)	1,300	8,410	3.58
Xylenes (total) (XYL)	260,000	260,000	3,960

**Legend**

**VOC Exceedances in Soil (Based on all NR 720 RCLs)**

- No NR 720 RCL Exceedance
- NR 720 RCL Exceedance
- - - NR 720 Groundwater Pathway Exceedance Contour
- - - Abandoned Water Pipe (in place)
- Water Main
- Sanitary Gravity Main
- Sanitary Lateral
- Storm Gravity Main
- Storm Lateral
- ▭ Site Boundary

Aerial imagery courtesy of the Southeastern Wisconsin Regional Planning Commission, 2015 orthophotography.